Dasylirion wheeleri

Journal Item

Dasylirion wheeleri

Colin C. Walker

Dasylirion is a genus that is not often encountered in cultivation in this country, because the plants are generally large-growing and hence not readily accommodated in pots in our usually smallish greenhouses. The plants are drought tolerant or xerophytic rather than true succulents. The genus was first described in 1838 and now includes 22 species according to the latest survey (Hochstätter, 2011). It currently belongs to the family Ruscaceae or the Asparagaceae, depending on whether you adopt a narrow or broader view of families. Until recently it was part of the much smaller family, the Nolinaceae, that included just four genera, but as a result of recent molecular studies this family is no longer recognised. The most familiar genus closest to *Dasylirion* is *Beaucarnea*, of which *B. recurvata*, with its large swollen stem is a very common plant in cultivation, since it is often found for sale in garden centres (Walker, 2001).

Dasylirions are short perennial shrubs with thick unbranched stems crowned with dense rosettes of leaves with flowers on tall, thin spikes. The name *Dasylirion* comes from the Greek: “dasy” means “shaggy” and “lirion” is lily. This relates to the shaggy, unkempt appearance of the plants, in which old specimens have large numbers of dead leaves clothing the stem. Plants have a fountain-like arrangement of the long, narrow, flat leaves.

The key feature that characterises plants of this genus is that the leaf margins are usually prickly. The individual prickles can be straight, curved forward or recurved towards the leaf base. Some species have a mixture of different prickle arrangements and some have smaller prickles between the large ones. These prickles are vicious, giving the leaves the appearance and feel of small serrated kitchen knives that clearly deter animals from eating them!

Colin admiring *Dasylirion wheeleri* flowering in June at the Lady Bird Johnson Wildflower Center, Austin, Texas. Photo: Marjorie Thorburn.

The genus is distributed throughout Mexico as far south as Oaxaca, and north into the southwest USA in Arizona, New Mexico and Texas, but it is absent from California.

I encountered *Dasylirion wheeleri* in cultivation at the Lady Bird Johnson Wildflower Center in Austin, Texas. The species was named for Lieutenant G.M.

Rosette of *Dasylirion wheeleri* showing the long slender leaves armed with vicious prickles.

Wheeler, who was leader of the geological and geographical survey of SW USA during which the species was discovered in 1875 in Arizona. It is now known to be one of the most widespread species, occurring in Arizona, New Mexico and Texas and south into Mexico (Sonora and Chihuahua), where it grows in grassland, open woodlands and scrubland. It reaches its eastern limit in the Franklin Mountains north of El Paso, Texas, where the plants are especially large and robust. It forms an attractive shrub with a single, unbranched stem up to 1.5 m tall with large numbers of arching, recurved leaves up to 1 m long but only about 2.5 cm across. The leaves are blue-green (glaucous) and nearly smooth, but as is typical for the genus, the leaf margins are armed with sharp, slender, straight to recurved prickles. The flower spike is slender and rises dramatically up to 4 m in height, as can be seen in the accompanying photo, and carries thousands of very small greenish-white flowers. Each plant produces only either male or female flowers and hence is described as being dioecious.

In cultivation the plant apparently has a tendency to rot in heavy soils and so requires good drainage.

Dasylirions have many uses and are commonly known by the Indian name of "sotol". The stems were used for building (posts in houses and corals) and for fuel. The leaves are trimmed off the stem and the remaining stump is roasted or boiled and then allowed to ferment to produce an alcoholic beverage, in much the same way that agaves are used to produce pulque, mescal and tequila. The leaves are much used for thatching, or are woven into mats or baskets, whilst the dried and varnished expanded leaf bases, so-called "desert spoons", are used in flower arrangements.

So, *D. wheeleri* is an attractive plant when it can be grown with unrestricted root room to enable it to reach its full potential. My own single potted specimen is merely a shadow of what it might become if it could be bedded out. I recommend this plant to those who have more space than I do. But be warned: if you ever encounter it, treat it gently because it bites back with a vengeance!

Finally, I thank Marjorie for the photo of me with a splendid specimen of *D. wheeleri.*

Colin

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References

Hochstätter, F. (2011) *Dasylirion* Zucc. (Nolinaceae) Revisione del genere/ Revision of the genus. 1-3. *Piante Grasse 31*(1): 25-30; (3): 106-122; (4): 162-181.

Walker, C.C. (2001) *Dasylirion*. In U. Eggli (ed.) *Monocotyledons. Illustrated Handbook of Succulent Plants*. Springer-Verlag, Berlin.

More on Dasylirion from Roland

Roland had a preview of this mag and noticed a blank space. Now filled thanks!

Roland saw this flowering Dasylirion at Kew. The information board noted that flowering is rare in the UK. Also the plant is dioecious and male flowers are white, females pink.

Kew commented that the flower spike was growing at a tremendous rate. Before the glass was removed, it grew nearly 50cm in 24 hours!

Update on *Viscum minimum* Lloyd Gordon

Ed: You will remember that Lloyd wrote us an interesting account of how he 'sowed' seeds of Viscum minimum on Euphorbias, (with inherent problems as he lives in Canada). We left the account waiting for something to happen.

After a few months, I figured the seedlings were on their own. No misting, just the usual plant care. I noticed some seedlings withered and dried up, others stayed green and plump. The haustoria on the *Euphorbia horrida* seemed to be coming a bit off despite the epoxy glue. Nothing happened for a long time.

Then I noticed a green bump on the whitish integument of the E. polygona. Sure enough, there were multiple growth points on both plants. Success! More and more have shown up on the E. polygona while the E. horrida just has two growth points, one right next to a haustorium and one a bit away.

LLoyd

Ed: You can guess I rushed to inspect my own sowing of Viscum. Not a sausage! Well no sign of new growth. Yet.